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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,495	05/25/2001	David E. Patterson	3017-55	4882

7590 11/25/2003  
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EXAMINER

ZEMAN, MARY K

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 11/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/866,495	Applicant(s) PATTERSON ET AL.	
	Examiner Mary K Zeman	Art Unit 1631	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |                                                                                              |                                                                             |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

Claims 1-7 are pending in this application.

Applicant's arguments filed 9/8/03 have been fully considered but they are not completely persuasive. Any rejection not repeated below has been withdrawn.

#### ***Claim Objections***

Claims 1-7 are objected to because of the following informalities: Each claim should begin with a capital letter and end with a single period. The pending claims have a multiplicity of periods, which could lend confusion as to where the claim ends. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new grounds of rejection.

The claims are drawn to virtual molecules which "could be made" from unspecified reactants and an unspecified common core through a computer-based methods. There are no actual molecules described by the claims. No particular families or types of molecules are described in the claims. The claims do not set forth any structural limitations which would limit the claimed molecules to a particular type or class. The claims do not set forth any functional limitations which could effectively limit the underlying structure of the molecules being claimed. The claimed molecules are to be made from reactants and common core molecules which are produced by a computer method operating on a virtual library. These are product-by-process type claims. The products themselves are not described in the specification, and therefore, there

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is no possession of the claimed invention. The process steps themselves do not produce any specific molecular structures or molecules- the end of the process results in the outputting a list of reactants which could be used in the creation of the claimed molecule. The specification, as filed, does not set forth any structures or particular molecules such as those being claimed. The entirety of the specification is directed to the process steps regarding data processing, virtual library creation and the application of validated molecular descriptors. None of this is a description of molecules that could be made in a combinatorial synthesis of reactants and a common core, as set forth in the claims. As such, the claims lack written description in the specification as filed. Applicant is encouraged to consult the Trilateral Project B3b on "reach-through claims". <http://www.uspto.gov/web/tws/sr-3.htm>

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This is a new ground of rejection.

The claims are drawn to molecules that "could be made" through combinatorial synthesis of reactants and a common core, through a computer based method. The metes and bounds of the claims are unclear, as none of the limitations set forth after the preamble make any physical, structural, or functional limitations to the "molecules" such that it is entirely unclear what is being claimed. There are no actual molecules described by the claims. No particular families or types of molecules are described in the claims. The claims do not set forth any structural limitations which would limit the claimed molecules to a particular type or class. The claims do not set forth any functional limitations which could effectively limit the underlying structure of the molecules being claimed.

Regarding claims 1-7, step a2 in each, the use of parenthetical expressions renders the claim indefinite because it is unclear whether the limitation(s) in the parentheses are part of the claimed invention.

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***Claim Rejections - 35 USC § 101***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific, substantial or credible asserted utility or a well established utility. This is a new ground of rejection.

The claims are drawn to molecules which “could be made” by a particular process. No molecules are actually made. No specific molecules are recited. No specific functions, activities, or use for the molecules are set forth in the claims. There are no actual molecules described by the claims. No particular families or types of molecules are described in the claims. The claims do not set forth any structural limitations which would limit the claimed molecules to a particular type or class. The claims do not set forth any functional limitations which could effectively limit the underlying structure of the molecules being claimed. As such, there is no specific, substantial and credible utility for the nonspecific, possible, virtual molecules set forth in the claims.

Claims 1-7 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific, substantial or credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

***Rejections Maintained***

Claims 1-7 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Applicants arguments have been fully considered, but are not persuasive. Applicant argues that the claims are directed to concrete, tangible and useful results, and that the specification teaches that the process steps overcome well known problems in the art. However, the claims are drawn to products that have no specific structure, or function or even any tangible identity. Furthermore, the process steps in the claims do not end with assembled molecules, but

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with lists of reactants and cores that must be further acted upon to be used. This does not meet the standard of concrete, tangible and useful.

As set forth previously, the claims are drawn to nonfunctional descriptive material. The claims are drawn to data representations of selected molecules that “could be made in a combinatorial synthesis of specified reactants and a common core” those molecules being selected by a particular computer-implemented method. These selected molecules are mere presentations of information or abstract ideas which have not been practically applied. (see, e.g., *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ 2d 1754, 1760 (Fed. Cir. 1994) (descriptive material *per se* is not patent eligible subject matter). No physical molecules are actually created or synthesized, and the data generated by the computer implemented method is merely a list of data structures meeting particular limitations and thresholds. See also the Report on Comparative Study in New Technologies Carried Out Under Trilateral Project WM4 accessible on the World Wide Web at:

[http://www.uspto.gov/web/tws/wm4/wm4\\_index.htm](http://www.uspto.gov/web/tws/wm4/wm4_index.htm)

Claims 1-7 remain rejected under 35 U.S.C. 102(e) as being anticipated by Agrafiotis et al. (5,463,564).

Applicant’s arguments have been fully considered, but they are not persuasive. Applicant’s arguments are directed to the process steps set forth in the product claims. However, the products of Agrafiotis are equivalent to the products being claimed absent evidence to the contrary. Since no physical products are actually identified or produced in the claims, the process limitations cannot be said to materially affect the nature of the product. The only apparent limitation in the claim that limits the nature of the molecules is that they could be made in a combinatorial synthesis of a reactant and a core. Therefore, Agrafiotis meets the limitations of the claims.

As set forth previously, the claims are drawn to data representations of selected molecules that “could be made in a combinatorial synthesis of specified reactants and a common core” those molecules being selected by a particular computer-implemented method. These are product-by-process claims drawn to nonfunctional descriptive material. Agrafiotis (USP 5,463,564- of record in 08/592132) discloses representations of molecules that could be created

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in a combinatorial synthesis of specified reactants and a common core. As such, this disclosure provides the same non-functional descriptive material as that being claimed.

***Conclusion***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (703) 305-7133. In January, after the move to the new facilities, the phone number will be: (571) 272-0723.

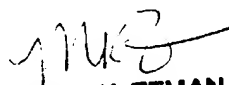
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached at (703) 308-4028. In January, after the move to the new facilities, the phone number will be: (571) 272-0722.

The Official fax number for this Art Unit is: (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC1600 Receptionist whose telephone number is (703) 308-0196.

mkz

11/21/03

  
**MARY K. ZEMAN**  
**PRIMARY EXAMINER**  
